APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,135	05/30/2000	Norio Saitoh	192292US2	1267

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
PARK, CHAN S

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/579,135	SAITOH, NORIO
	Examiner	Art Unit	
	CHAN S PARK	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>24 June 2004</u>.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-22</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment was received on 7/20/04, and has been entered

and made of record. Currently, **claims 1-22** are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-22 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Objections

3.   Claim 1 is objected to because of the following informalities: "A printer

driver" should be corrected as "a print driver" in line 6.

        Appropriate correction is required.

4.   Claims 16 and 18 are objected to because of the following informalities:

"printer driver" should be corrected as "print driver".

        Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-9, 11-14 and 16-22 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Amano et al. U.S. Patent No. 6,100,996 (hereinafter

Amano) in view of Hiratsuka et al. U.S. Patent No. 5,301,271 (hereinafter

Hiratsuka).

5.   With respect to claim 1, Amano discloses a printer system (printer 1000 in

fig. 1) which inputs drawing data defining a drawing object (documents) created

or edited by an application on a host computer (col. 11, line 64 – col. 12, line 4),

converts the drawing data defining the drawing object to a printer language to

create print data (col. 15, lines 16-19), and also outputs the image drawn based

on the print data from a printer (col. 12, lines 33-36), said printer system

comprising:

a print driver (CPU 1 in conjunction with ROM 3b) which configured to add

information (a character code and a draw command in col. 14, lines 31-32)

separate from the converted drawing object data to the print data to identify each

type of drawing object (col. 14, lines 30-34 & col. 15, lines 20-23); and

a printer control unit (CPU 12 in conjunction with ROM 13) which

configured to select dither data based on the information added by the print

driver identifying the particular type of drawing object and to execute a dither method based on the selected dither data to form the image drawn (col. 14, lines 34-49).

It is evident that the draw command is **separate** from the print data since the command is not printed with the graphic. Additionally, Amano teaches that identification information, which indicates image area of character area or graphic area, may be maintained **separately** from the print data. Knowing the print information is clearly sent from the host 3000, it is apparent to one of ordinary skill in the art that the information must have been generated and attached/added to the print data.

Amano, however, does not disclose expressly the printer driver that adds area fill information when the drawing object is graphic data.

Hiratsuka, on the other hand, discloses a system for adding area fill information when the drawing object is a graphics data (col. 7, lines 3-17) and selecting an appropriate dither method based on the received code information (col. 7, lines 57-68). Hiratsuka clearly discloses a step of discriminating the graphic data (image data) for image development from other data (lines 15-17) by analyzing image development code. Thus, when the drawing data is a graph data indicated by the image development code, the host computer adds area fill information to the data (lines 7-8).

Amano and Hiratsuka are analogous art because they are from the same field of endeavor that is printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of indicating the presence of area fill in a graphic image taught by Hiratsuka with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano.

The motivation for doing so would have been to recognize the area fill information for applying and performing a proper dither method in the particular areas.

Therefore, it would have been obvious to combine Amano with Hiratsuka to obtain the invention as specified in claim 1.

6.   With respect to claim 2, Amano further discloses a printer control unit comprising:

an object determination unit configured to determine a drawing object of the print data based on the information added by the print driver identifying the particular type of drawing object (col. 14, lines 34-37);

a dither data output unit configured to select dither data matching the drawing object determined by said object determination unit to output the selected dither data (col. 14, lines 44-49); and

a drawing processing unit, which executes a dither method on the print data, using the selected dither data output from said dither data output unit to expand the print data to an image (col. 14, line 52 – col. 15, line 9).

7.   With respect to claim 3, Amano further discloses the drawing object that

includes at least one of character data, and photograph data, in addition to

graphics data (col. 15, lines 45-50).

8.   With respect to claim 4, Hiratsuka discloses the printer system, wherein

when the drawing object is graphics data and the information added by the print

driver to the print data indicates the drawing object is graphics data with no area

fill, said printer control unit selects dither data appropriate for the graphics data

with no area fill (col. 7, lines 3-8). Since Hiratsuka teaches the method of

detecting the presence of the area fill information, it is apparent to one of ordinary

skill in the art that the printer control unit would select appropriate dither data for

the graphic data with no area fill.

9.   With respect to claim 6, arguments analogous to those presented for

claims 1 and 2, are applicable.

10.   With respect to claim 7, arguments analogous to those presented for

claims 1 and 2, are applicable.

11.   With respect to claim 8, arguments analogous to those presented for claim

3, are applicable.

12.   With respect to claim 9, arguments analogous to those presented for claim

4, are applicable.

13.   With respect to claim 11, arguments analogous to those presented for

claims 1 and 2, are applicable. Also see col. 12, lines 5-10 of Amano.

14.   With respect to claim 12, arguments analogous to those presented for

claims 1 and 2, are applicable.

15.   With respect to claim 13, arguments analogous to those presented for

claim 3, are applicable.

16.   With respect to claim 14, arguments analogous to those presented for

claim 4, are applicable.

17.   With respect to claim 16, Amano discloses a printer configured to input

drawing data defining a drawing object, to convert the drawing data defining the

drawing object to a printer language to create print data (col. 15, lines 10-13),

and to output an image being drawn based on the print data (col. 15, lines 13-

15), said printer further comprising:

    a print driver configured to add information separate from the converted

drawing data (a bit map image) for the print data to the print data to identify the

type of drawing object as photograph data (natural picture).

    Note that Amano clearly distinguishes a graphic data from the

photographic data by analyzing the parameter of the print information (col. 14,

lines 30-33).

    Amano, however, does not disclose expressly the printer driver that adds

area fill information when the drawing object is graphic data.

    Hiratsuka, on the other hand, discloses a system for adding area fill

information when the drawing object is a graphics data (col. 7, lines 3-17) and

selecting an appropriate dither method based on the received code information

(col. 7, lines 57-68). Hiratsuka clearly discloses a step of discriminating the

graphic data (image data) for image development from other data (lines 15-17)

by image development code. Thus, when the drawing data is a graph data

indicated by the image development code, the host computer adds area fill

information to the data (lines 7-8). Additionally, it is well known to one of ordinary

skill in the art that the graphic data with area fill is recognized as photographic

data.

Amano and Hiratsuka are analogous art because they are from the same

field of endeavor that is printing art.

Therefore, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to combine the method of indicating the

presence of area fill in a graphic image taught by Hiratsuka with the printing

system that selects dither data appropriate for a drawing object based on the

information for a drawing object added to the print data taught by Amano.

Furthermore, since it is well known to one of ordinary skill in the art that

the graphic data with area fill is recognized as photographic data and Hiratsuka

teaches the method of adding area fill information and the method of detecting

the area fill information, it would have been obvious to one of ordinary skill in the

art at the time of the invention to realize the print data as a photographic data

when the area fill information is present.

The motivation for doing so would have been to recognize the area fill

information for applying and performing a proper dither method in the particular

areas.

Therefore, it would have been obvious to combine Amano with Hiratsuka

to obtain the invention as specified in claim 16.

18.   With respect to claim 17, arguments analogous to those presented for claims 1 and 3, are applicable.

19.   With respect to claim 18, arguments analogous to those presented for claims 1 and 4, are applicable.

20.   With respect to claim 19, Amano discloses a printer configured to input drawing data defining a drawing object, to convert the drawing data defining a drawing object to a printer language to create print data (col. 15, lines 10-13), and to output an image being drawn based on the print data (col. 15, lines 13-15), said printer further comprising:

a printer control unit (CPU 12 in conjunction with ROM 13) which configured to select dither data based on the information added by the print driver identifying the particular type of drawing object and to execute a dither method based on the selected dither data to form the image drawn (col. 14, lines 34-49).

Amano, however, does not disclose expressly the printer control unit which selects and executes dither data with area fill based on information for photograph appropriate for a graphic data with area fill.

Hiratsuka, on the other hand, discloses a system for adding area fill information (thus becoming a photograph data) when the drawing object is a graphics data (col. 7, lines 3-17) and selecting an appropriate dither method based on the received code information (col. 7, lines 57-68). Hiratsuka clearly discloses a step of discriminating the graphic data (image data) for image development from other data (lines 15-17) by image development code. Thus,

when the drawing data is a graph data indicated by the image development code, the host computer adds area fill information to the data (lines 7-8). Additionally, it is well known to one of ordinary skill in the art that the graphic data with area fill is recognized as photographic data.

Amano and Hiratsuka are analogous art because they are from the same field of endeavor that is printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of indicating the presence of area fill in a graphic image taught by Hiratsuka with the printing system that selects dither data appropriate for a drawing object based on the information for a drawing object added to the print data taught by Amano.

Furthermore, since it is well known to one of ordinary skill in the art that the graphic data with area fill is recognized as photographic data and Hiratsuka teaches the method of adding area fill information and the method of detecting the area fill information, it would have been obvious to one of ordinary skill in the art at the time of the invention to realize the print data as a photographic data when the area fill information is present.

The motivation for doing so would have been to recognize the area fill information for applying and performing a proper dither method in the particular areas.

Therefore, it would have been obvious to combine Amano with Hiratsuka to obtain the invention as specified in claim 19.

21.   With respect to claim 20, arguments analogous to those presented for claims 1 and 2, are applicable.

22.   With respect to claim 21, arguments analogous to those presented for claims 1 and 3, are applicable.

23.   With respect to claim 22, arguments analogous to those presented for claims 1 and 4, are applicable.

Claims 5, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Amano and Hiratsuka as applied to claims 1, 6, and 11 above, and further in view of Nakajima U.S. Patent No. 6,266,152.

24.   With respect to claim 5, the combination of Amano and Hiratsuka discloses all the limitations of claim 1 but it does not teach if the drawing data can be CAD data created by a CAD application.

Nakajima, however, discloses a printing system comprising a print driver (driver 20) for selecting appropriate color matching methods for natural, graphic, and text image (col. 8, table 1), and a print controller (controller 70) that performs dither process on the basis of drawing command (col. 6, lines 58-65). The reference further teaches that the drawing data can be CAD data to perform accordingly (col. 8, lines 31-41).

Amano, Hiratsuka, and Nakajima are analogous art because they are from same field of endeavor that is the printing art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of applying CAD

data to the printing system taught by Nakajima with the printing system that

selects dither data appropriate for a drawing object based on the information for

a drawing object added to the print data taught by Amano.

The motivation for doing so would have been to apply correct dither

correction method to the CAD data created by a CAD application and to prevent

the possibility of erasing the black thin lines in the mapping process.

Therefore, it would have been obvious to combine Amano and Hiratsuka

with Nakajima to obtain the invention as specified in claim 5.

25.   With respect to claim 10, arguments analogous to those presented for

claim 5, are applicable.

26.   With respect to claim 15, arguments analogous to those presented for

claim 5, are applicable.

Conclusion

27.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to CHAN S PARK whose telephone number is

(703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The

fax phone number for the organization where this application or proceeding is

assigned is 703-872-9306.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

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direct.uspto.gov. Should you have questions on access to the Private PAIR

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free).

Chan S. Park
Examiner
Art Unit 2622

csp
August 18, 2004

EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600